EDQPY-2QPx

100G QSFP28 to 2x 50G QSFP28 Copper Breakout Cable

PRODUCT FEATURES

- Compliant with IEEE 802.3bj
- Compliant with SFF-8665
- Up to 100Gb/s data rates
- Ultra low crosstalk for improved performance
- Low insertion loss
- BER better than 10-15
- Serial numbers printed on each end
- Tested in an end-to-end system
- RoHS compliant

APPLICATIONS

- Low EMI radiation Switches, servers and routers
- Data Center networks
- Storage area networks
- High performance computing
- Telecommunication and wireless infrastructure
- Medical diagnostics and networking

DESCRIPTIONS

ETU-LINK's EDQPY-2QPx provides robust connections for leading edge100Gb/s systems. Passive copper cables require no additional power to ensure quality connectivity. The100Gb/s passive copper cables are fully compliant with SFF-8436 specification and provide connectivity between devices using QSFP28 ports. ETU-LINK's EDQPY-2QPx fills the need for short, cost-effective connectivity in the data center.

ETU-LINK's high-quality solutions provide a power-efficient replacement for active power connectivity such as fiber optic cables for short distances. Optimizing systems to operate with ETU-LINK's EDQPY-2QPx significantly reduces power consumption and EMI emission.

The Low Smoke Zero Halogen (LSZH) design fully complies with the European Union Restriction of Hazardous Substances (RoHS) directive and similar North American safety and environmental standards.

Ordering Information

Part No.	Description
EDQPY-2QPx-30	100G QSFP28 to 2x 50G QSFP28 Copper Breakout Cable (DAC) 0~3M 30AWG
EDQPY-2QPx-26	100G QSFP28 to 2x 50G QSFP28 Copper Breakout Cable (DAC) 3~5M 26AWG

Notes:

1. where "x" denotes cable length in meters. Examples are as follows:
2. x = 1 for 1m,

Recommended Operation Condition

Parameter	Symbol	Min	Max	Unit
Operating Case Temperature	Topc	0	70	degC
Storage Temperature	Tst	-40	125	degC
Relative Humidity (non-condensation)	RS	-	85	%
Supply Voltage	VCC3	3.135	3.465	V
Voltage on LVTTL Input	Vilvttl	-0.3	VCC3 +0.2	V
Power Supply Current	ICC3	0.001	-	mA
Total Power Consumption	Pd	-	0.003	W

Notes:
Stress or conditions exceed the above range may cause permanent damage to the device.
This is a stress rating only and functional operation of the device at these or any other conditions above those listed in the operational sections of this specification is not applied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Frequency Domain

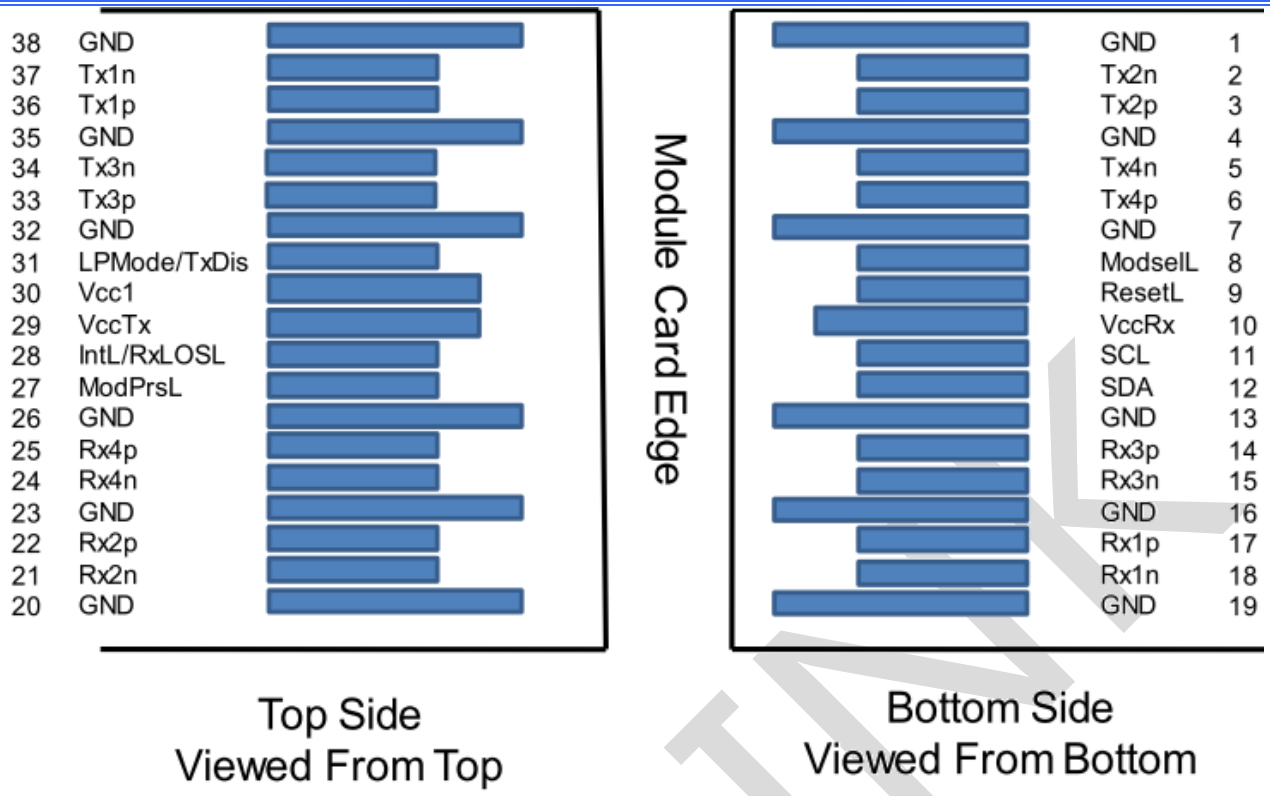
Item	Test Parameter	IEEE802.3bj Specification
1	Differential Insertion Loss (SDD12)	Maximum insertion loss at 12.8906Ghz -22.48dB Minimum insertion loss at 12.8906Ghz -8dB
2	Differential Insertion Loss (SDD21)	Maximum insertion loss at 12.8906Ghz -22.48dB Minimum insertion loss at 12.8906Ghz -8dB
3	Differential Return Loss (SDD22)	-16.5+2xSQRT(f) @ 0.01 to 4.1GHz -10.66+14xLog10(f/5.5) @4.1 to 19GHz
4	Differential Return Loss (SDD11)	-16.5+2xSQRT(f) @ 0.01 to 4.1GHz -10.66+14xLog10(f/5.5) @4.1 to 19GHz
5	Common Mode Reflection (SCC22)	-2dB @ 0.01 to 19GHz
6	Common Mode Reflection (SCC11)	-2dB @ 0.01 to 19GHz
7	Common Mode Conversion (SCD22)	-22+(20/25.78)*(f) @ 0.01 to 12.89GHz -15+(6/25.78)*(f) @ 12.9 to 19GHz
8	Common Mode Conversion (SCD11)	-22+(20/25.78)*(f) @ 0.01 to 12.89GHz -15+(6/25.78)*(f) @ 12.9 to 19GHz

Time Domain

Item	Test Parameter	Specification (Proposal)
1	Intra-Skew* 1M 1.5M~2M 2.5M~3M	 20ps Max 25ps Max 30ps Max
2	Impedance	100 +/- 10 Ohm
	Rise time: 14ps (20%~80%)	
3	Insertion Loss* (SDD21)for 1M	a) 0.6GHz : -2.09 dB Max b) 1.25GHz : -2.88 dB Max c) 2.50GHz : -3.69 dB Max d) 3.25GHz : -4.72 dB Max e) 5.0GHz : -5.82 dB Max
3	Insertion Loss* (SDD21) for 1.5M	a) 0.6GHz : -2.10 dB Max b) 1.25GHz : -3.24 dB Max c) 2.50GHz : -5.65 dB Max d) 3.25GHz : -5.99 dB Max e) 5.0GHz : -6.90 dB Max
3	Insertion Loss* (SDD21) for 2M	a) 0.6GHz : -2.28 dB Max b) 1.25GHz : -3.76 dB Max c) 2.50GHz : -5.08 dB Max d) 3.25GHz : -6.74dB Max e) 5.0GHz : -8.14 dB Max
3	Insertion Loss* (SDD21) for 2.5M	a) 0.6GHz : -2.53 dB Max b) 1.25GHz : -4.35 dB Max c) 2.50GHz : -5.93 dB Max d) 3.25GHz : -7.90dB Max e) 5.0GHz : -9.45 dB Max
3	Insertion Loss* (SDD21) for 3M	a) 0.6GHz : -2.77 dB Max b) 1.25GHz : -4.79 dB Max c) 2.50GHz : -6.94 dB Max d) 3.25GHz : -8.73 dB Max e) 5.0GHz : -10.58 dB Max

Pin

Descriptions



Pin Descriptions

PIN	Logic	Symbol	Name/Description	Note
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	1
8	LVTLL-I	ModSelL	Module Select	
9	LVTLL-I	ResetL	Module Reset	
10		VccRx	+ 3.3V Power Supply Receiver	2
11	LVCMOS-I/O	SCL	2-Wire Serial Interface Clock	
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	1
20		GND	Ground	1

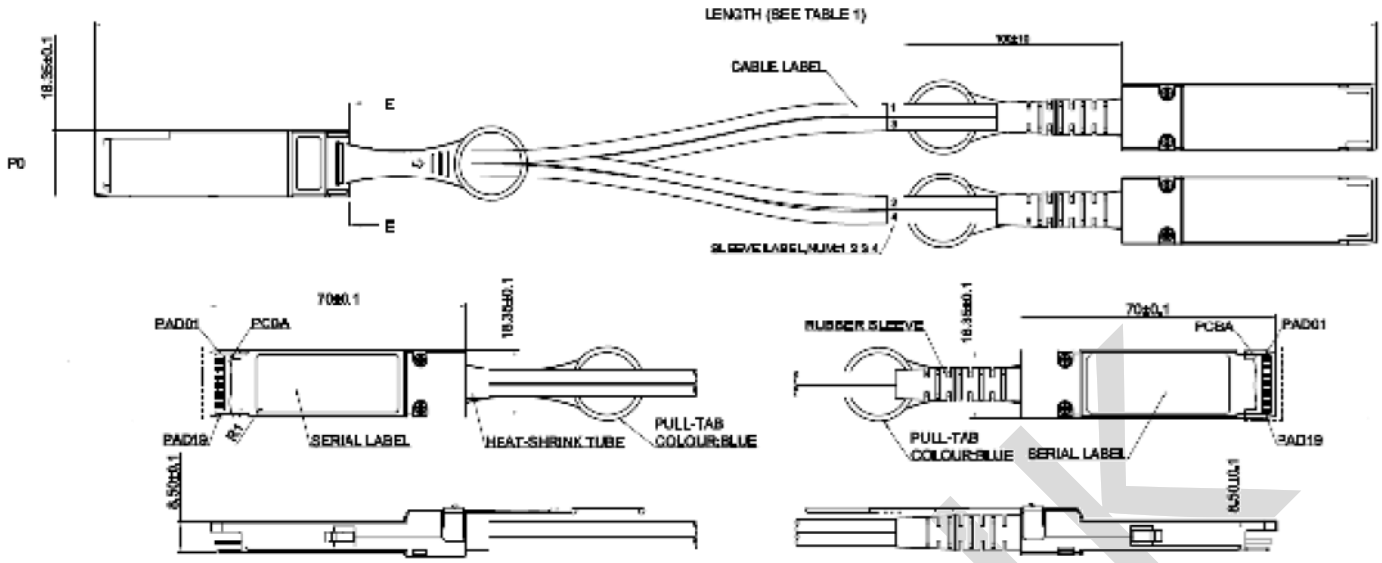
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	1
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	2
30		Vcc1	+3.3 V Power Supply	2
31	LVTTL-I	LPMode	Low Power Mode	
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	1

Notes:

1) Module circuit ground is isolated from module chassis ground within the module. GND is the symbol for signal and supply (power) common for QSFP modules.

2) The connector pins are each rated for a maximum current of 500mA.

Mechanical Dimensions



Revision History

Version No.	Date	Description
1.0	May 24 , 2021	Preliminary datasheet
1.1	July 26, 2024	Format change

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